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CONLEY ROSE, P.C. 600 TRAVIS SUITE 7100 HOUSTON, TX 77002			EXAMINER MAHMOUDZADEH, NIMA	
			ART UNIT 2619	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,337

Applicant(s)

TANJU, BAH A T.

Examiner

NIMA MAHMOUDZADEH

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-14, 18-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 7, 15-17, and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 03/24/2008 has been entered. Claims 1- 21 and 24-28 are still pending in this application, with claims 1, 10, 18, and 24 being independent.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 6, 10, 18-21, 24-26, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Girard (US Patent No. 4,812,840).

Regarding claim 1, Girard teaches a system, comprising:

a first master device (Fig. 1, element 22);

a second master device (Fig. 1, element 20);

a redundancy manager coupled to the first and second master devices (Fig. 1, 10); and

a slave device coupled to the redundancy manager (Fig. 1, element 28),

wherein the redundancy manager is operable to receive a first data stream from the first master device and a second data stream from the second master device (Column 3, lines 16-34, both master devices are connected to the switch 10 which is why it senses the interruption of priority signal and switch from one master to another master device), and

wherein the redundancy manager is operable to selectively forward one of the first and second data streams to the slave device (Column 3, lines 7-9 and lines 21-26 both master devices are connected to the switch 10 which is why it senses the interruption of priority signal and switch from one master to another master device).

Regarding claim 2, Girard teaches the system of claim 1 wherein the first and second master devices comprise computers that are not configured to share data associated with the slave device directly with each other (In Fig. 1, the primary and back-up controller are not configured to communicate directly with each other).

Regarding claim 3, Girard teaches the system of claim 1 wherein the first and second master devices are in different locations such that a user having access to the first master device is not able to simultaneously access the second master device and vice versa (In Fig. 1, both master devices are independent and separate from each other. Also, a slave device cannot communicate to both at the same time).

Regarding claim 5, Girard teaches the system of claim 1 wherein the redundancy manager is configured to selectively forward one of the first and second data streams based on a validity estimation of the second data stream, mastership

transfer commands from the first and second master devices, and timing considerations (Column 3, lines 26-33, examiner interpretation of validation is to distinguish between a non-priority and priority signal. As soon as priority interruption is sensed, the non-priority data is not going to be valid any more).

Regarding claim 6, Girard teaches the system of claim 5 wherein the first and second master devices are configured to send the mastership transfer commands to the redundancy manager in response to user intervention and at least one of data content received from the slave device and a lack of data received from the slave device (Column 3, lines 7-9 and lines 21-26 and column 8, lines 16-30).

Regarding claim 10, Girard teaches a redundancy manager device for providing redundant data communication to a slave device, the redundancy manager device comprising:

a first processor (Fig. 2, element 32) ; and

a switching mechanism coupled to the first processor (Fig. 2, element 30),

wherein the switching mechanism is configured to receive a first data stream associated with a first master device and a second data stream associated with a second master device (Fig.1, and Fig. 3, also see column 3, lines 57-59 which discloses the number signals on the port),

wherein the switching mechanism is configured to implement a default configuration that forwards one of the first and second data streams to the slave device

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(Fig.1 discloses a block diagram of a multiple mode switch in which used to couple an ATM selectively to a primary or a back-up processor controller),

wherein the first processor is configured to provide a switch control signal that causes the switching mechanism to switch between forwarding the first data stream and forwarding the second data stream (Fig. 2, element 32),

wherein the first processor asserts and de-asserts the switch control signal in response to a determination of first and second data stream validity and mastership transfer commands associated with the first and second master devices considerations (Column 3, lines 16-33, examiner's interpretation of assert and de-assert is the interruption or removing the interruption to the process based on the validity which is priority or no—priority signals).

Regarding claim 18, Girard teaches a method, comprising:

receiving a plurality of data streams (Fig. 2, 16 and 18); and forwarding one of the data streams according to a prioritization of data stream validity, requests to forward a particular data stream, and a switch-based timing threshold (It is inherent that when priority request is received within in certain time interruption will be applied by control logic. Column 3, lines 16-33).

Regarding claim 19, Girard teaches the method of claim 18 further comprising cycling between forwarding the data streams if a determination is made that none of the data streams are valid (Column 3, lines 7-9 and lines 21-26).

Regarding claim 20, Girard teaches the method of claim 19 further comprising detecting when a data stream becomes valid and setting a relay to forward the valid data stream (Column 3, lines 7-9, lines 21-26 and Fig. 1).

Regarding claim 21, Girard teaches the method of claim 20 further comprising upon receiving a request to forward a particular data stream determining if the particular data stream is associated with a healthy master device (Column 8, lines 16-22).

Regarding claim 24, Girard teaches a system, comprising:

a first master device (Fig. 1, element 22);

a second master device (Fig. 1, element 20);

a slave device (Fig. 1, element 28) responsive to commands received from the first and second master devices (Column 3, lines 16-33 disclose the two master devices that based on the nature of the signal received, interruption is applied to either one of them to transmit the signals to and from the ATM device which is the slave device);

means for switching mastership of the slave device coupled between the master devices and the slave device (Fig. 1, switch-10); and

means for controlling coupled to the means for switching mastership (Fig. 2, element 32), wherein the means for controlling asserts and de-asserts a signal to control the means for switching mastership based on requests originating from an active master device and requests originating from an idle master device (Fig. 2, elements 30 and 32).

Regarding claim 25, Girard teaches the system of claim 24 wherein the means for controlling further controls the means for switching mastership based on a validity estimation of the data streams from the first and second master devices (Control information mentioned on column 2, lines 51-68), and timing considerations (Column 3, lines 1-33).

Regarding claim 26, Girard teaches the system of claim 24 wherein the first and second master devices are configured to send requests to transfer mastership in response to user input and at least one of data content received from the slave device and a lack of data received from the slave device (Column 3, lines 7-9 and lines 21-26 and column 8, lines 16-30).

Regarding claim 28, The system of claim 1 wherein both of the first and second master devices are configured to simultaneously monitor a data stream from the slave device (Column 3, lines 16-33 disclose a system that both master devices are connected to the switch 10 of Fig. 2 and by utilizing elements 32 and 30 switch 10 can give the right of way to the signal with the priority status).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Girard (US Patent No. 4,812,840) in view of Dickie et al. (US Patent No. 5,587,707).

Regarding claim 4, Girard teaches the system of claim 1, but fails to teach wherein the slave device comprises a subsea tool. However, Dickie et al. teach wherein the slave device comprises a subsea tool (Fig. 3, element 15A).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to add subsea level tool to system taught by Girard to be able to have uninterrupted communication between surface and slave equipments.

6. Claims 8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girard (US Patent No. 4,812,840) in view of Morimoto et al. (European Patent Application No. EP0545001)

Regarding claim 8, Girard teaches the system of claim 1 but fails to teach a second redundancy manager coupled to the first master device, the second master device and the slave device, wherein the second redundancy manager is operable to receive the first and second data streams and forward one of the first and second data streams to the slave device via a second communication path that is separate from a first communication path used to transmit data from the first redundancy manager to the slave device. However, Morimoto et al. teach a second redundancy manager coupled to the first master device, the second master device and the slave device, wherein the second redundancy manager is operable to receive the first and second data streams and forward one of the first and second data streams to the slave device via a second

communication path that is separate from a first communication path used to transmit data from the first redundancy manager to the slave device (Fig. 1, C0 and C1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a second redundancy manager to the system taught by Girard in order to communicate with the slave device utilizing the first and second redundancy manager.

Regarding claim 11, Girard teaches the redundancy manager device of claim 10 but fails to teach a redundancy manager further comprising a second processor, wherein the second processor is configured to determine the second data stream validity and assert a health signal to the first processor when the second data stream is invalid. However, Morimoto et al. teach a redundancy manager further comprising a second processor, wherein the second processor is configured to determine the second data stream validity and assert a health signal to the first processor when the second data stream is invalid (It is inherent that having second processing unit speeds up the process that was done before by only one CPU. Page 6 lines 12-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a second processor taught by Morimoto et al. to redundancy manager in order to determine the second data stream validity and assert a health signal to the first processor.

Regarding claim 12, Girard teaches the redundancy manager device of claim 11 but fails to teach wherein the second processor is further configured to assert a first

mastership transfer signal to the first processor in response to a mastership transfer command associated with transferring mastership from the first master device to the second master device. However, Morimoto et al. teach wherein the second processor is further configured to assert a first mastership transfer signal to the first processor in response to a mastership transfer command associated with transferring mastership from the first master device to the second master device (Interruption signal can be a membership transfer signal explained in column 3, lines 16-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a second processor to device taught by Girard to determine second data stream validity and assert health signal to the first processor.

Regarding claim 13, Girard teaches the redundancy manager device of claim 12 wherein the second processor is further configured to assert a second mastership transfer signal to the first processor in response to a mastership transfer command associated with transferring mastership from the second master device to the first master device (Interruption signal can be a membership transfer signal explained in column 3, lines 16-33).

Regarding claim 14, Girard teaches the redundancy manager device of claim 13 wherein the first processor is configured to determine if the first data stream is invalid and to periodically determine an assertion state of the health signal, first mastership transfer signal, and the second mastership transfer signal (In column 3, lines 29-33 at

any time a priority signal is received the control is going to switch from one device to the device with priority).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Girard (US Patent No. 4,812,840) in view of Morimoto et al. (European Patent Application No. EP0545001) and further in view of Dickie et al. (US Patent No. 5,587,707)

Regarding claim 9, Girard in view of Morimoto et al. teach the system of claim 8 but fails to teach the slave device comprises a redundant subsea tool that is configured to receive data from both the first communication path and the second communication path, wherein the redundant subsea tool comprises redundant sensors and redundant controllers and wherein each sensor and controller is operable to perform a function according to data received from at least one of the first and second communication paths. However, Dickie et al. teach the slave device comprises a redundant subsea tool (Fig. 3, 15A) that is configured to receive data from both the first communication path and the second communication path, wherein the redundant subsea tool comprises redundant sensors and redundant controllers and wherein each sensor and controller is operable to perform a function according to data received from at least one of the first and second communication paths. (Fig. 6)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the slave device taught by Girard in view of Morimoto et al. to perform as subsea tool with redundancy capabilities to increase the precision of data transmitted to surface.

Allowable Subject Matter

8. Claims 7, 15-17 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 7 and 27, Girard (US Patent No. 4,812,840) teaches a multiple mode switching means. However, prior art of record fail to teach or render obvious, alone or in combination, the timing consideration which prevents switching back and forth between first and second adapt stream if less than a threshold amount of time has passed as claimed in dependent claims 7 and 27 in combination with all limitations in respective independent claims and their intervening claims.

Regarding claims 15-17, Girard (US Patent No. 4,812,840) in view of Morimoto et al. (EP 0545001) teach multiple mode switching means and failure detection in a redundant duplex system. However, prior art of record fail to teach or render obvious, alone or in combination, wherein the first processor is configured to periodically assert a reset signal to the second processor whereby the second processor resets the health signal, the first mastership transfer signal, and the second mastership transfer signal as claimed in dependent claim 15 in combination with all limitations in the independent claim 10 and its intervening claims.

Response to Arguments

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10. Applicant's arguments filed 03/24/2008 have been fully considered but they are not persuasive.

On page 8 of the Applicant's response, Applicant argued that controllers 20 and 22 are not master devices, they are controlled by a processor and they are slave for processor 24 or simple relays rather than master device as cited in claim 1. The Examiner respectfully disagrees. As disclosed in Figures 1 and 2, and also, column 2 explanation of Fig. 1, devices 20 and 22 are primary and back-up device for the primary which can have internal or external processing elements. A relay does not require a processor to perform a job of relaying signal but in this case, device 10 selects the device 20 and 22 based on the processing that has to perform by the control logic 32 and mode select unit 30.

On page 8 of the Applicant's response, Applicant argued that Girard does not teach "master devices being remote from each other" of claim 3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., master devices being remote from each other) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 9 of the Applicant's response, Applicant argued that Girard does not teach "the validity of the data streams" of claim 5. The Examiner respectfully disagrees. As disclosed on column 3, lines 16-33, examiner interpretation of validation is to

distinguish between a non-priority and priority signal. As soon as priority interruption is sensed, the non-priority data is not going to be valid any more.

On page 9 of the Applicant's response, Applicant argued that Girard does not teach "combine the manual mode with data content or lack of data from the slave device" of claim 6. The Examiner respectfully disagrees. As disclosed on column 3, lines 7-26 and column 8, lines 16-30, one of the modes defined on the multi-mode switch 10 is the manual mode that element 30 is set manually to either one of the master controller 20 or 22.

On page 9 of the Applicant's response, Applicant argued that Girard does not teach "data stream validity and much less cycling between forwarding different data streams" of claim 19. The Examiner respectfully disagrees. As disclosed on column 3, lines 21-33, examiner interpretation of validation is to distinguish between a non-priority and priority signal. As soon as priority interruption is sensed, the non-priority data is not going to be valid any more. If non-priority is sensed and the priority signal is not present, ATM access to non-priority controller is granted.

On page 10 of the Applicant's response, Applicant argued that Girard does not teach "combine user input with whether data is received from the slave device or not" of claim 26. The Examiner respectfully disagrees. As disclosed on column 1, lines 50-63 which disclose manual control mode for selecting first or second master controller priority in response to a request signal therefrom.

On page 10 of the Applicant's response and regarding claim 28, as disclosed on column 3, lines 16-33 disclose a system that both master devices are connected to the

switch 10 of Fig. 2 and by utilizing elements 32 and 30 switch 10 can give the right of way to the signal with the priority status.

Furthermore, the same response to arguments applies to claims 1, 10, 18, and 24 and their dependent claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **NIMA MAHMOUDZADEH** whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NIMA MAHMOUDZADEH/
Examiner, Art Unit 2619

**/Chirag G Shah/
Supervisory Patent Examiner, Art Unit 2619**